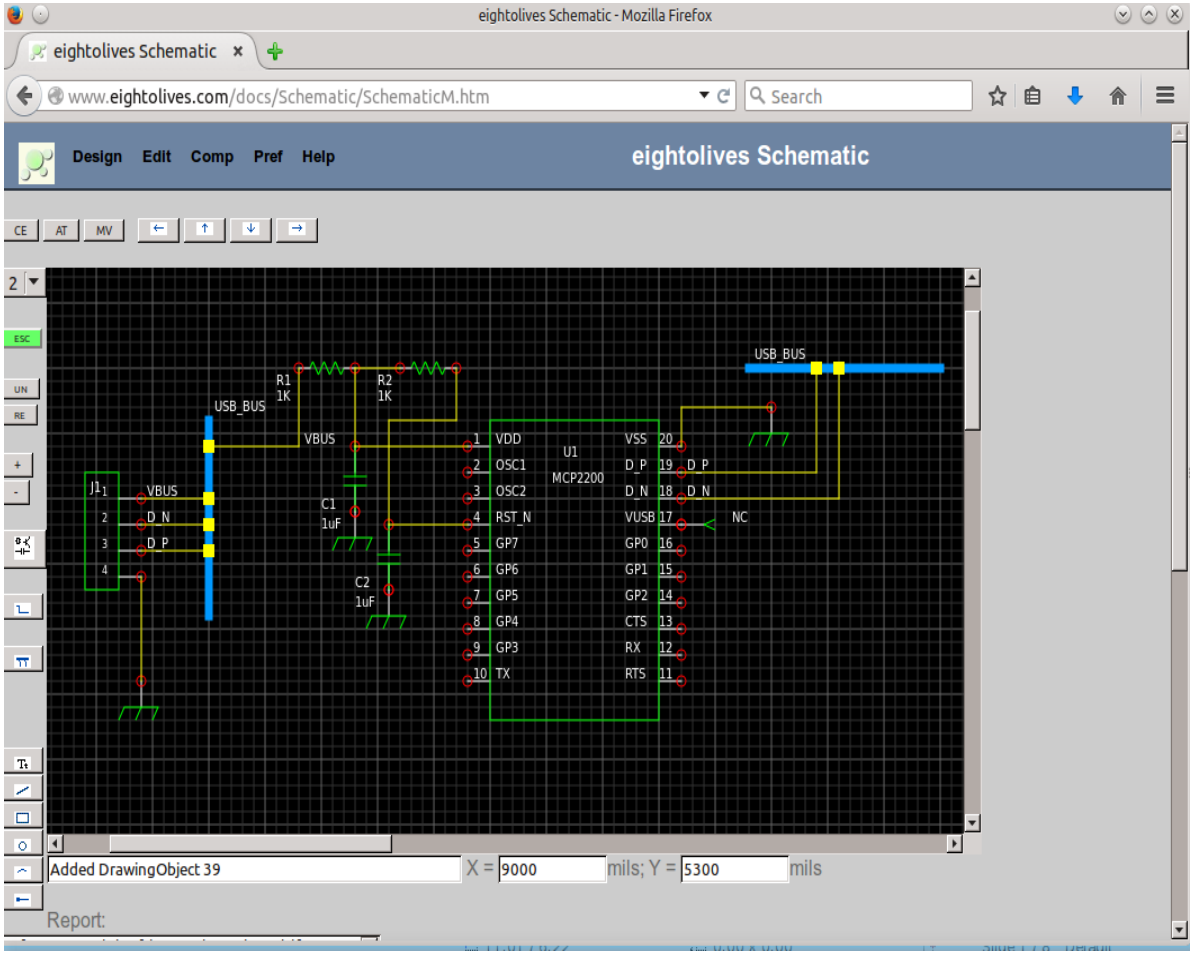
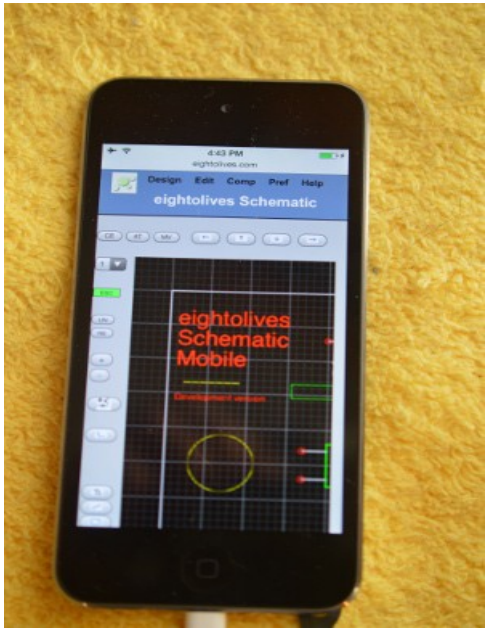
Using Buses in Schematic Mobile





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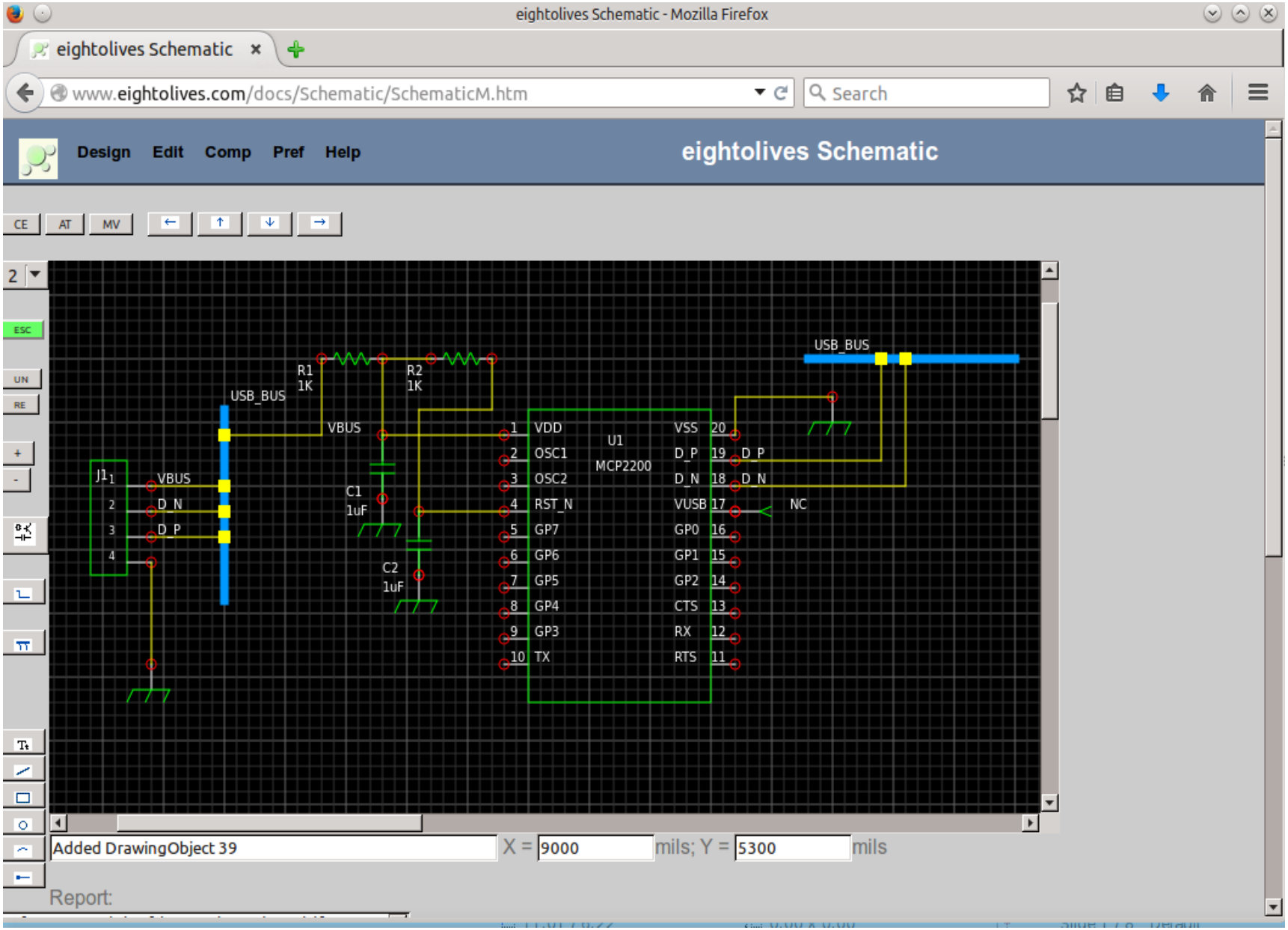
A Bus is an *abstract* group of Nets

- In making a schematic to generate a netlist, **only *nets* connecting *pins* of components matter**.
- A bus is an abstract grouping of nets used to graphically simplify the depiction of interconnects.
  - It does not affect netlist generation
  - In saved schematic files, buses appear only as graphic symbols.

Draw Net
Draw Bus



Drawing a Bus

- You draw a bus by clicking the Draw Bus button and drawing it
- You are prompted for a bus name
- Nets that you connect to a bus become ***bus members***
- A bus is defined at the schematic level
- Check Design reports on buses and their members

Schematic Mobile Can Apply Buses in Two Ways

1) Graphic Only (gEDA schematic compatible)
   - Use nets to connect the bus to pins on a component
2) Component Connectible
   - Can connect the bus directly to a “bus pin” on a component via a stub
   - Actual net connections can then be made to “hidden” pins on the component symbol

Graphic Only (gEDA compatible)

- Nets connect a component to a bus
- The bus does not affect the netlist

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Resulting Netlist:

D_N J1-2  U1-18

D_P J1-3  U1-19

GND J1-4

P5V J1-1  U1-17
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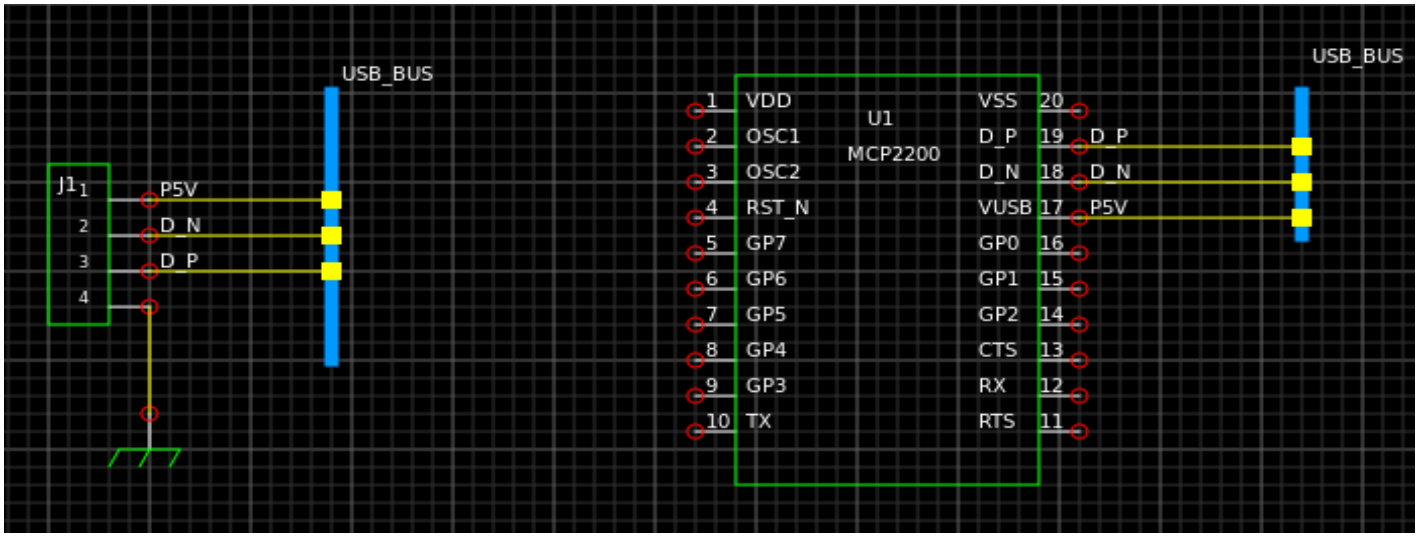
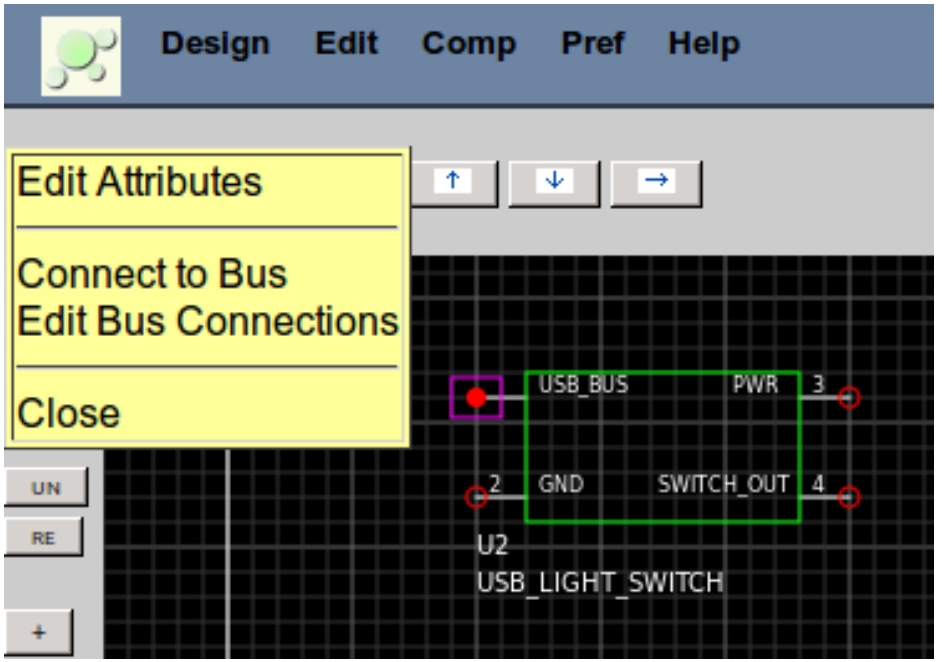
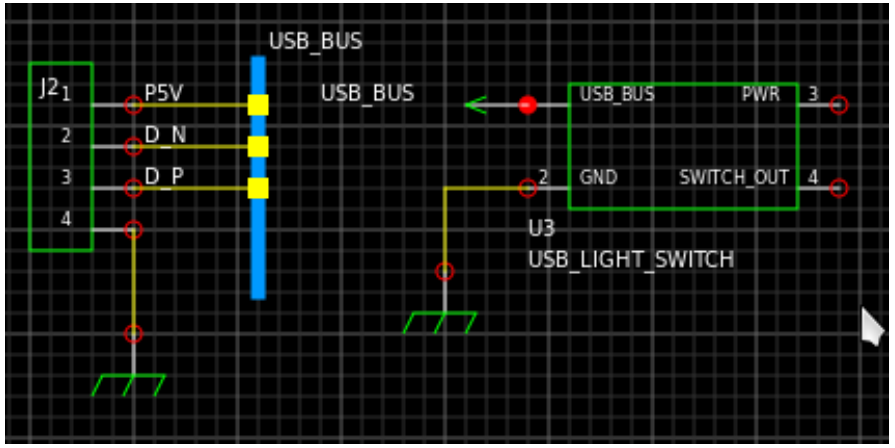


Component Connectible

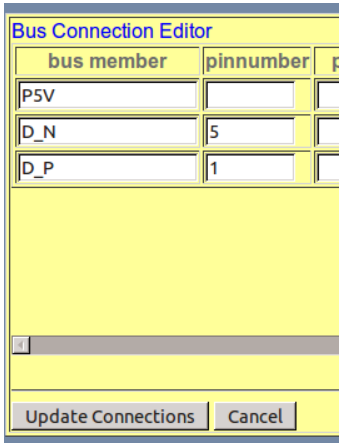


A “bus pin” is defined by gEDA as a pin with property “pintype” = 1, but it's use is “not used”.

- A pin can be designated a “bus pin” from the pin popup menu when creating a symbol
- It is shown as a solid filled pin
- The component pin's popup lets you Connect to a Bus and Edit Bus Connections to the component

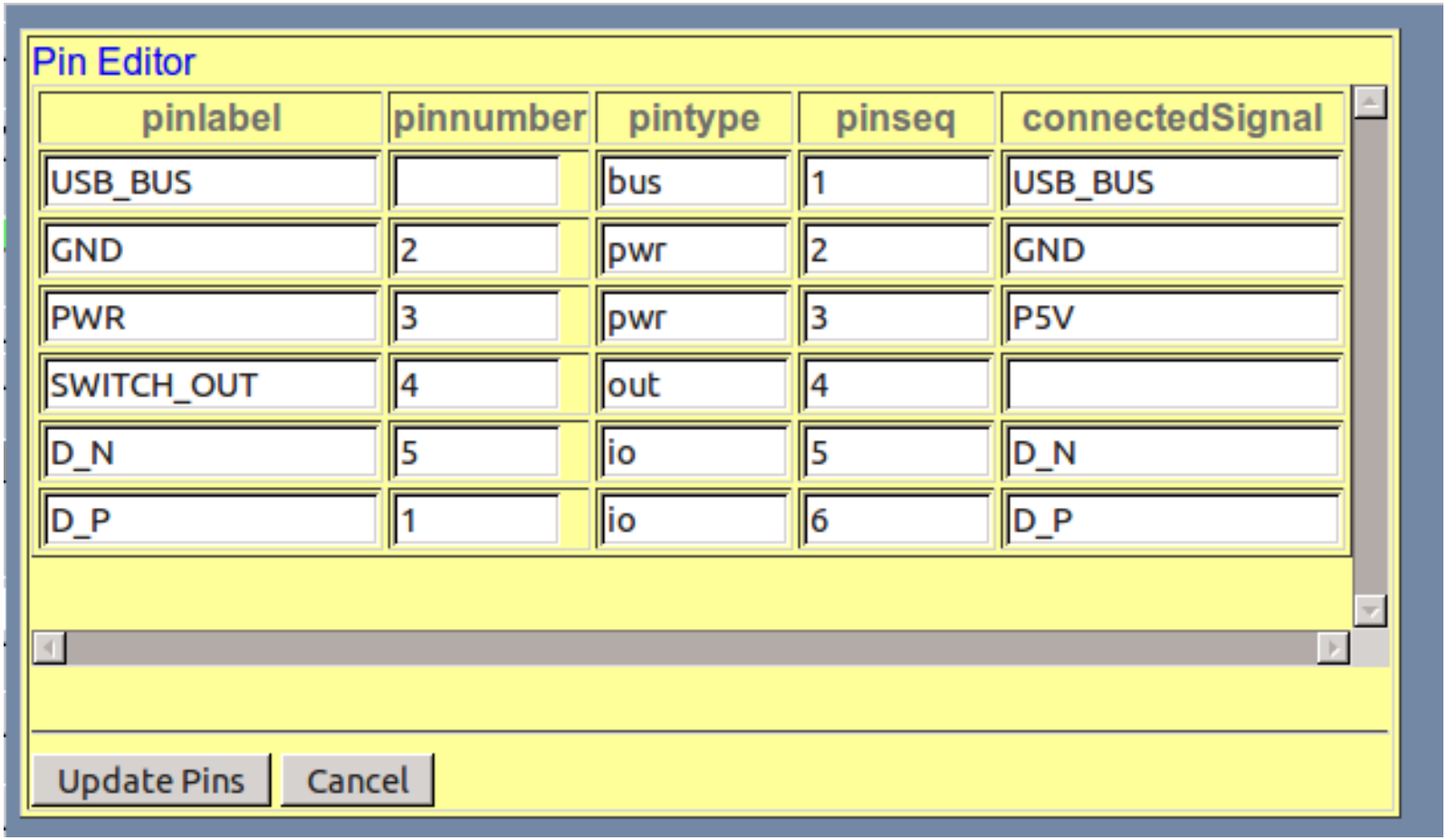


- The pin's Connect to Bus popup option adds a net stub to the selected bus



- The Bus Connector Editor lets you assign pin numbers to bus members which will connect to the component. Hidden pins are added to the component.

The Pin Editor will then display the added “hidden pins”



For more information:

- Use the Help menu options
- Check http://www.eightolives.com for other tutorials